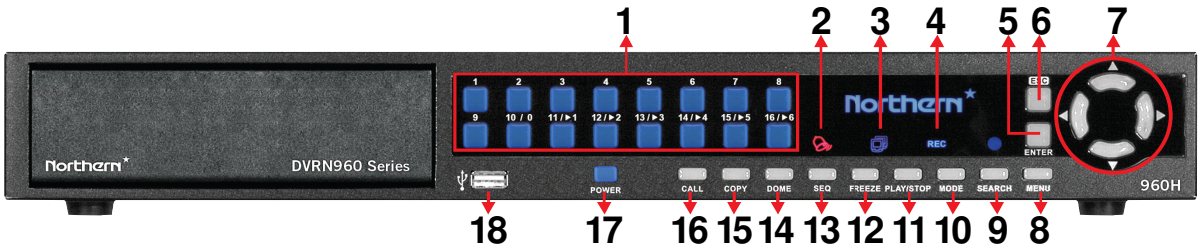
DVRN960 Series Setup Guide

Package Contents

Inspect the packaging carton to make sure the **DVRN960** was properly delivered. Make sure the box contains the following items.

Power Supply / Cord | **IR Remote & Mouse** | **Audio & Alarm Cables** | **Manuals & Disc** | **Rack Ears**

Front Panel

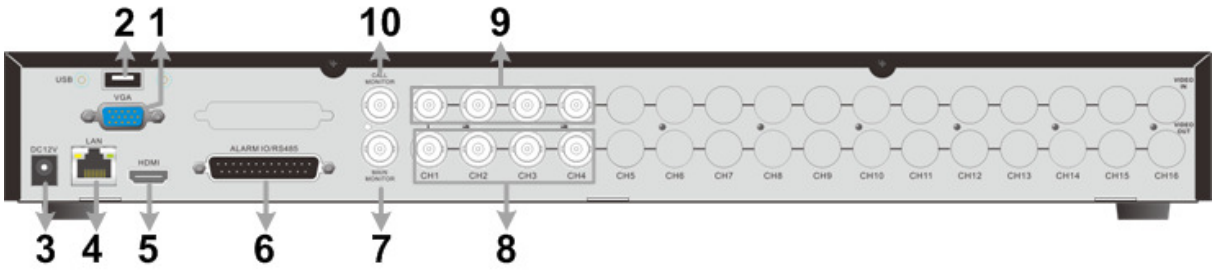


1	**Channels**	In Live or Playback mode, press any key to view the corresponding video in full-screen.
2	**Alarm LED**	Lights up when an alarm is triggered.
3	**Network LED**	Lights up when network is connected. In addition, it also blinks when data is being transmitted via the network.
4	**Record LED**	Blinks when video is being recorded.
5	**ENTER**	1. In the OSD main menu or selection interface, press this key to make the selection or save settings. 2. In live and playback full-screen viewing mode, press this key to view a 2x zoom image; press it again to return.
6	**ESC**	Press this key to cancel or exit from certain control modes.
7	**Direction Keys**	1. In Zoom mode, these keys function as normal direction keys. 2. In the OSD main menu, the direction keys are used to move the cursor to previous or next fields. To change the values in the selected field, press UP / DOWN keys.
8	**MENU**	Press this key to enter the OSD main menu.
9	**SEARCH**	Press this key to search the recorded videos by date / time or event.
10	**MODE**	Press this key to view in full-screen or multiple-window modes.
11	**PLAY**	Press once to start playing back the recorded video. Press again to exit.
12	**FREEZE**	Press this key to freeze the current viewing screen.

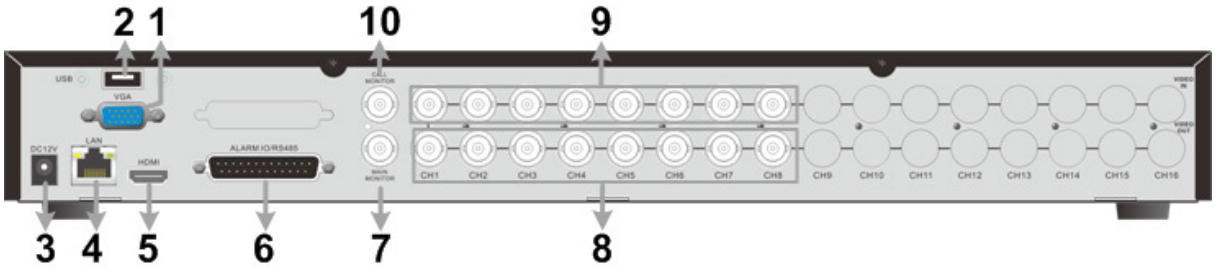
13	**SEQ**	Press this key to start an automatic sequence display of cameras.
14	**DOME**	Press this key to enter the Dome Camera Control mode.
15	**COPY**	This key is used for marking time in quick video export function.
16	**CALL**	Press this key to control call monitor.
17	**Power Key**	Press this key to power on the DVR.
18	**USB 2.0 Port**	The USB 2.0 port allows users to connect external USB devices to the unit, such as a USB ThumbDrive or a USB mouse.

Rear Panel

4CH models:

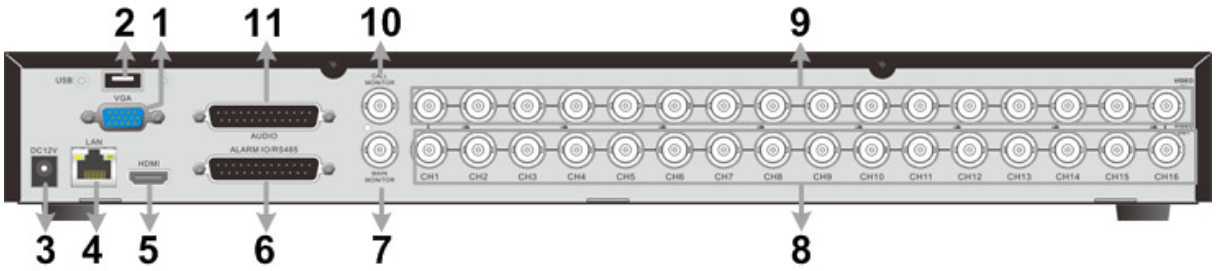


8CH models:



1	**Main Monitor (VGA)**	VGA output is offered for connecting to VGA monitors.1280x1024, 1024x768 resolutions recommended for 4:3 aspect monitors.
2	**USB 2.0 Port**	The USB 2.0 port allows users to connect external USB devices to the unit, such as a USB ThumbDrive or a USB mouse.
3	**Power Jack**	Connect the power supply cord shipped with the DVR. Use of other power supply cords may cause overloading.
4	**LAN 10/100/1000M (RJ-45)**	The DVR is capable of networking, and it allows the videos to be viewed over the LAN network or the Internet via internet browsers.
5	**Main Monitor (HDMI)**	HDMI output is offered for connecting to a HDMI main monitor. Supports 1080p,720p,1280x1024,1024x768 resolutions.
6	**Alarm I/O, RS-485 & Audio In/Out**	The DVR provides alarm I/O, RS-485 & Audio In ports that offer users the flexibility to connect the unit to other devices.
7	**Main Monitor (BNC)**	BNC output is offered for connecting to a BNC main monitor.
8	**Video Out (BNC)**	The same amount of BNC connectors beneath Video In (BNC) are offered for looping out the video from the specific input.
9	**Video In (BNC)**	A group of BNC connectors is provided for video input streams from installed cameras. The number of connectors equals to the number of channels.
10	**Call Monitor (BNC)**	BNC connector is provided for connecting to a BNC call monitor.

16CH models:



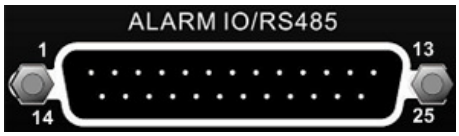
1	**Main Monitor (VGA)**	VGA output is offered for connecting to VGA monitors.1280x1024, 1024x768 resolutions recommended for 4:3 aspect monitors.
2	**USB 2.0 Port**	The USB 2.0 port allows users to connect external USB devices to the unit, such as a USB ThumbDrive or a USB mouse.
3	**Power Jack**	Connect the power supply cord shipped with the DVR. Use of other power supply cords may cause overloading.
4	**LAN 10/100/1000M (RJ-45)**	The DVR is capable of networking, and it allows the videos to be viewed over the LAN network or the Internet via internet browsers.
5	**Main Monitor (HDMI)**	HDMI output is offered for connecting to a HDMI main monitor. Supports 1080p,720p,1280x1024,1024x768 resolutions.
6	**Alarm I/O & RS-485**	The DVR provides alarm I/O and RS-485 ports that offer users the flexibility to connect the unit to other devices.
7	**Main Monitor (BNC)**	BNC output is offered for connecting to a BNC main monitor.
8	**Video Out (BNC)**	The same amount of BNC connectors beneath Video In (BNC) are offered for looping out the video from the specific input.
9	**Video In (BNC)**	A group of BNC connectors is provided for video input streams from installed cameras. The number of connectors equals to the number of channels.
10	**Call Monitor (BNC)**	BNC connector is provided for connecting to a BNC call monitor.
11	**Audio In/Out**	An Audio connector is provided for connecting audio input devices for all channels and an audio ouput device for the Main monitor.

Pin Definition of Alarm I/O & RS-485, and Audio

Pin Definition of Alarm I/O & RS-485 and Audio In (4CH / 8CH models)

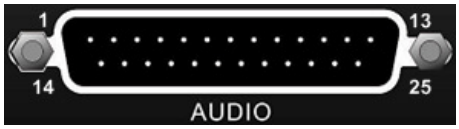
Pin	Definition	Pin	Definition	Pin	Definition
1	GND	10	Alarm In 1	19	Audio In 2
2	GND	11	RS485 D+	20	Alarm In 8 (8CH only)
3	Audio In 7 (8CH only)	12	Alarm Out COM	21	Alarm In 6 (8CH only)
4	Audio In 5 (8CH only)	13	Alarm Out Open	22	Alarm In 4
5	Audio In 3	14	GND	23	Alarm In 2
6	Audio In 1	15	Main Audio Out	24	RS485 D–
7	Alarm In 7 (8CH only)	16	Audio In 8 (8CH only)	25	Alarm Out Close
8	Alarm In 5 (8CH only)	17	Audio In 6 (8CH only)		
9	Alarm In 3	18	Audio In 4		

Pin Definition of Alarm I/O & RS-485 (16CH models)



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out Open	8	Alarm In 3	15	Reserved	22	Alarm In 13
2	Alarm Out COM	9	Alarm In 4	16	Reserved	23	Alarm In 14
3	RS485 D+	10	Alarm In 5	17	Reserved	24	Alarm In 15
4	RS485 D–	11	Alarm In 6	18	Alarm In 9	25	Alarm In 16
5	Reserved	12	Alarm In 7	19	Alarm In 10		
6	Alarm In 1	13	Alarm In 8	20	Alarm In 11		
7	Alarm In 2	14	Alarm Out Close	21	Alarm In 12		

Pin Definition of Audio (16CH models)



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio In 1	8	Audio In 15	15	Audio In 4	22	GND
2	Audio In 3	9	GND	16	Audio In 6	23	GND
3	Audio In 5	10	GND	17	Audio In 8	24	GND
4	Audio In 7	11	GND	18	Audio In 10	25	Reserved
5	Audio In 9	12	Reserved	19	Audio In 12		
6	Audio In 11	13	Main Audio Out	20	Audio In 14		
7	Audio In 13	14	Audio In 2	21	Audio In 16		

Live Panel Buttons

The functional buttons are displayed in the Live Panel when the mouse pointer moves to the right of the screen. Refer to the table below for definition of each button.

Item	Icon	Description	Item	Icon	Description	Item	Icon	Description
1		Enter	6		Up	11		Esc
2		Left	7		Down	12		Right
3		Mode	8		Freeze	13		Search
4		Play/Stop	9		Sequence	14		Menu
5		Call Monitor	10		Dome Camera Control			

Power On the DVR

Please follow the proper power-on procedures to avoid damaging the DVR.

- Connect all necessary components, e.g. monitor, USB mouse, and cameras, before powering on the DVR.
- Check the type of power source before plugging in the power cord to the DVR. The acceptable power input is between AC110V ~ AC240V.
- After the power key on the front panel is blinking, press it to power on the DVR.

Select Viewing Mode:

- Press **MODE** repeatedly to select the preferred display mode. The available viewing modes are full-screen, 4-window, 9-window, and 16-window.
- Press **FREEZE** to pause the current viewing image.

NOTE: 9-window viewing mode is only available for 8CH and 16CH models. As for 16-window viewing mode, it is only available for 16CH models.

Basic Setup

Enter the OSD main menu and setup some basic configuration of the DVR. The basic configuration can be set via either the DVR or DVR**Remote**, the remote software.

Enter OSD Main Menu:

- Press **MENU** to enter the OSD main menu.
- Select the administrator account "**admin**" to login. Enter the preset password "**1234**".
- It is strongly suggested to change the password to prevent unauthorized access.

Date / Time Setting:

Follow steps below to setup date / time before the recording starts. Refer to the User's Manual for advanced setup of Time Sync function.

- Select <**Date**/**Time**> in System menu.
- Select the date and time, and adjust the value with **UP** / **DOWN** keys.
- The new date and time settings take effect after the changes are confirmed.

Language Setting:

If users wish to change language of the DVR system, follow the steps below.

- Select <**Language**> in System menu and press **ENTER**.
- Press the **UP** / **DOWN** keys to choose the preferred language.

Network Setup

Configure the LAN setup for the DVR to properly function with Ethernet connection. The default IP of the **DVRN960** must be changed to avoid network conflicts.

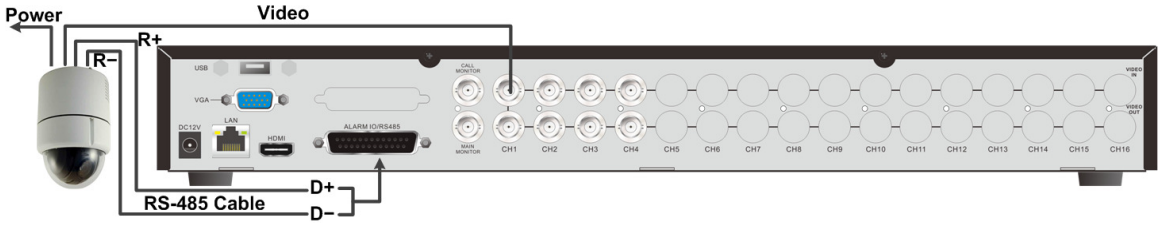
- From the OSD main menu, select <**System**> → <**Network Setup**>, set the <**LAN Select**> item to <**LAN**>, <**PPPoE**>, or <**None**> according to the network application, and enter <**LAN Setup**>.
- For DHCP users, set the DHCP to <**On**>. The IP address, Netmask, Gateway and DNS settings are retrieved from network servers. DHCP is dynamic that the settings change from time to time.
- For Non-DHCP users, set the DHCP to <**Off**>. IP address, Netmask, Gateway and DNS settings must be set. Please obtain the information from the network service provider.
- To change the IP address, Netmask, Gateway and DNS value, press **UP** / **DOWN** keys to move the cursor to the item. Use **LEFT** / **RIGHT** keys to access each section and press **ENTER**, then change the value with **UP** / **DOWN** keys.
- PPPoE users must set the <**PPPoE Account**> and <**PPPoE Password**> as well.
- When complete the settings, press **ENTER** to confirm and save the settings; or, press **ESC** abort.

Dome Camera Control

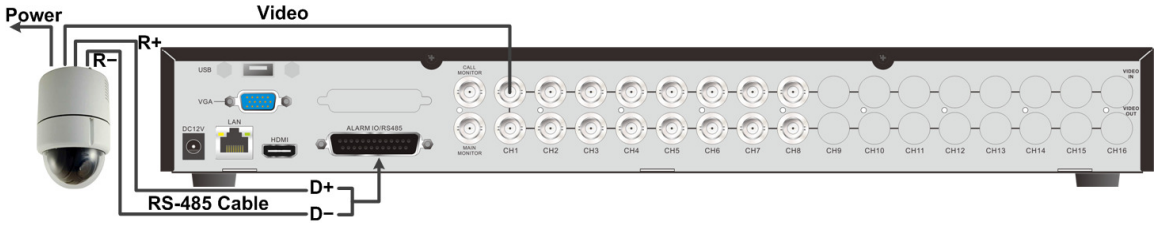
Dome Camera Connection & Settings:

- See section Pin Definition of Alarm I/O & RS-485, and Audio for RS-485 port pin definition.
- Refer to the following figures. Connect the R+, R- terminals on the dome camera to the RS-485 D+, D- terminals on the DVR by RS-485 cable respectively.

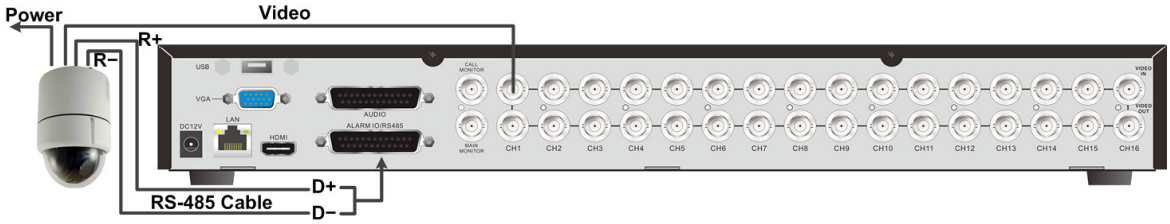
4CH models:



8CH models:

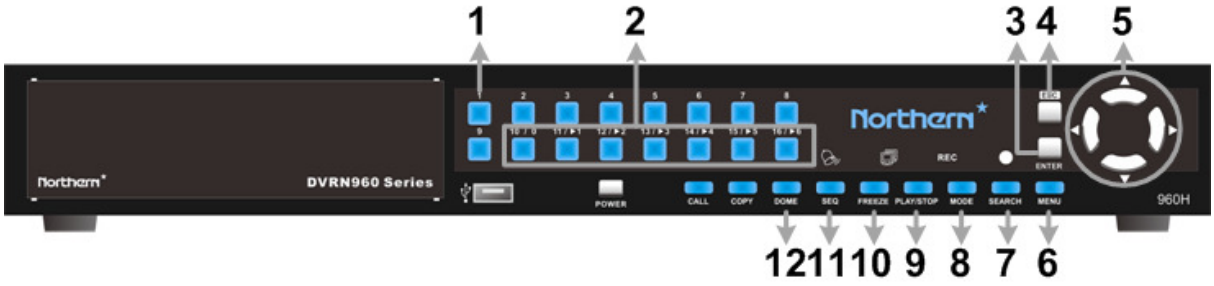


16CH models:



- To set up the dome protocol and ID of the camera, press **MENU** to access the OSD main menu, and select <**Camera**>. Then select <**Dome Protocol**> and choose the corresponding protocol. Next, select <**Dome ID**> and choose a preferred ID number. Note that the ID number must match the ID address defined by the dome camera.
- To configure the RS-485 parameters, select <**System**> from OSD main menu, and then select <**RS485 Setup**>. The default RS-485 settings are 9600 Baud, 8 Data Bits, 1 Stop Bit and No Parity.

Control Keys in Dome Camera Control Mode:



1	Set / Go Preset	**5**	Pan / Tilt	**9**	Iris Close
2	Go Presets 1~6 (16CH models only)	**6**	Zoom In	**10**	Focus Far
3	Enter / Auto	**7**	Zoom Out	**11**	Focus Near
4	ESC	**8**	Iris Open	**12**	Enter Dome Camera Control Mode

Control Buttons in Dome Camera Control Panel:

Icon	Description	Icon	Description
	Iris Open		Iris Close
	Focus Near		Focus Far
	Zoom In		Zoom Out
	Set / Go Preset Points		Return to Live Mode
	Move the Lens to the Left		Move the Lens to the Right
	Move Up the Lens		Move Down the Lens
	Auto Focus		

Basic Playback Operation

Search By Time:

- Press **SEARCH** to enter the Search menu.
- Move the cursor to “From”, and press **ENTER** to start playing the recorded video from the beginning of the database.
- Move the cursor to “End” and press **ENTER**, and the playback will start from the end of the database.
- Move the cursor to “Select” and press **LEFT** / **RIGHT** keys to choose date / time. Press ENTER and adjust the values with **UP** / **DOWN** keys. Press **ENTER** again to confirm or **ESC** to abort.
- Move the cursor to <**Begin Playback**> and press **ENTER** to start playing back recorded video of the selected time. Press **PLAY/STOP** again to return to live video.

NOTE: If there is no available recorded video that matches the specified time and date, the unit starts to playback from the next available video.

Calendar Search:

- Press **SEARCH** to enter the Search menu.
- Move the cursor to <**Calendar Search**> and press **ENTER**, a calendar will show up.
- Select any underlined date, which indicates recording data are available. The table on the left will display available videos of each channel within the selected date.
- The videos are classified into four categories: **Normal**, **Motion**, **Alarm In** and **Video Loss**, shown as four different tabs on the top.
- Then select a preferred time from the time bar. Alternatively, specify the values of date / hour / minute / second under <**Select**> on the bottom-right corner.
- Move the cursor to <**From**> or <**End**> and press **ENTER** to indicate the beginning or the end of the database.
- Press <**Begin Playback**> and press **ENTER** to start playing back the selected video.

Search by Event:

- Press **SEARCH** to enter the Search menu.
- To search event video that was recorded on a specific camera: Use **LEFT** / **RIGHT** keys to move the cursor and press **ENTER** to select or de-select the channel.
- Move the cursor to <**Event List**> and press **ENTER** to list the event video of the selected channels.
- The list displays each event by date, time, triggered camera and alarm type. The latest recorded event video will be listed on the top. To exit the event list, press **ESC**.
- Use **UP** / **DOWN** keys to scroll through the Event List. Press the buttons below to see the previous or next pages of the Event List. Press **ENTER** to playback the selected event video.

NOTE: The event list displays only the first 1024 events; as some events are deleted, others will be displayed.

Playback Controls:

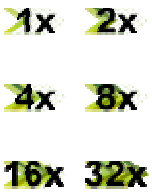
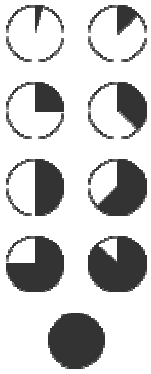
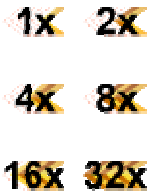
Button	Description
LEFT	The button is to rewind the recorded video while playing back. Press the button repeatedly to increase the speed of reverse playback by 1x, 2x, 4x, 8x, 16x, or 32x.
RIGHT	The button is used to play the recorded video fast forward. Press this button repearedly to increase the speed of forward playback by 1x, 2x, 4x, 8x, 16x, or 32x.
FREEZE	Press **FREEZE** to pause the playback. When the recorded video is paused, press **LEFT** / **RIGHT** to playback the video single step reverse / forward respectively. Press **FREEZE** again to continew playing back the video.
PLAY	Press to start the playback or to stop playing back the video and return to Live mode.

Playback Controls of Control Panel Buttons:

Icon	Description	Icon	Description
	Time Frame of the Previous Time Bar		Time Frame of the Next Time Bar
	Backward Playback: Click repeatedly to increase speed by 1×, 2×, 4×, 8×, 16×, or 32×.		Forward Playback: Click repeatedly to increase speed by 1×, 2×, 4×, 8×, 16×, or 32×.
	Step Backward: Only shows when playback is paused.		Step Forward: Only shows when playback is paused.
	Pause Playback		Change Viewing Mode
	Mark Video Export Time		Search Menu
	Return to Live Mode	4hr	Scale Time Bar by 4 Hour
12hr	Scale Time Bar by 12 Hour	24hr	Scale Time Bar by 24 Hour

DVRN960 Status Bar Icons

Icons that will be displayed in the status bar are listed in the following table with their descriptions.

Item	Icon	Description	Item	Icon	Description
1		Main Monitor	14		Quick Export
2		Call Monitor	15		Stamp A
3		Monitor Active / Inactive	16		Stamp B
4		Sequence	17		Lock
5		Record	18		Disk Error
6		Event Record	19		Disk Full
7		Freeze @ Live Mode	20		Disk Overheat
8		Dome Camera Control	21		No Disk
9		Zoom	22		Disk Almost Full
10		Forward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	23		HDD Usage
11		Pause @ Playback mode	24		Guest
11		Backward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	25		User's Authority Level
13		End of Video			

Connecting the DVRN960 via the Remote Software

Setup Requirements:

- Make sure the PC is connected to the Internet.
- Obtain the IP address of the **DVRN960**. To check the IP address of the DVR, press **MENU** on the front panel and select <**System**> → <**Network Setup**> → <**LAN Setup**> → <**IP**> to check the IP.

Changing Internet Setting:

The **DVRN960** only supports 32-bit IE browser. However, the DVR does not support IE browser under WinMetro mode.

- Start the IE; select <**Tools**> from the main menu of the browser, then <**Internet Options**> and then click the <**Security**> tab.
- Select <**Trusted Sites**> and click <**Sites**> to specify its security setting.
- Uncheck "Require server verification (https:) for all sites in this zone". Type the IP address of the unit in field and click <**Add**> to add this website to the zone.
- In the Security Level area, click <**Custom Level**>. Under <**ActiveX controls and plug-ins**>, set all items to <**Enable**> or <**Prompt**>.
- Click <**OK**> to accept the settings and close the <**Security Settings**> screen.

Using the Remote Software:

- Start IE and enter the IP address of the **DVRN960** in the address bar.
- The ActiveX controls and plug-ins dialog will show up twice for confirmation; click <**YES**> to accept ActiveX plug-ins. The DVR**Remote** plug-ins will be downloaded and installed on the PC automatically when the connection is successfully made.

NOTE: Do not enter any leading "0" characters in the address, for example, "192.068.080.006" should be entered as "192.68.80.6".

NOTE: If the default trigger port 80 is changed to another port, e.g. port 81, the IP address should be entered as "192.68.80.6**:81**".

- Version verification starts automatically to verify whether DVR**Remote** was installed. This process may take up to 30 seconds.
- When the software is completely downloaded and installed, the Login Window is displayed.
- Enter username and password. The default username and password is **admin** and **1234**.

The following picture shows the display window of the DVR**Remote**:

Refer to the table below for brief description of functional items:

Item	Description	Item	Description
1	Audio On/Off	10	4:3 Viewing Aspect
2	2-Way Audio Talk	11	Capture Snapshot
3	Instant Recording	12	Search Event List
4	Select Camera	13	Setup Menu
5	Display Mode	14	Playback Video
6	Bandwidth – Normal/Dual Stream	15	View Live Camera
7	Dome Camera Control	16	Download DVRPlayer
8	Playback Control	17	Select Picture Size
9	HDD Status		

For more information on DVR**Remote**, see User's Manual.

DVRRemote Playback

Playback Remote Video:

- Click <**Play**> on the main window toolbar, and then <**Remote Playback**> tab.
- <**From**> and <**To**> on top of the screen display the date and time from which recorded video is available for playback.
- Choose <**Playback**> in <**Select**> field to playback the recorded video.
- Select the date and time of the segment to play back from the <**Start**> field. The date and time can be changed by either typing desired numbers directly or using the arrow buttons.
- Click <**OK**> to start the playback, or click <**Close**> to abort.

Playback Local *.drv File:

- Click <**Play**> on the main window toolbar, and then <**Local Playback**> tab.
- Click <**Open**> and the file selection screen is displayed. Select the *.drv video file to playback and click <**OK**>.
- Click <**OK**> to start the playback, or click <**Cancel**> to abort.
- View the video playback by using the Playback controls.
- To end the playback, click <**Live**> to return to live video.

Playback Local *.avi Files:

- Start the windows media player or other media players from <**Start**> menu (or any other possible access).
- Select <**File**> and then <**Open**>.
- Select the wanted *.avi file, and click <**Open**>.

NOTE: The *.avi files for each channel are stored separately. Therefore the video can be played back in single channel, full screen mode only.

Playback Event Video:

- Click **SEARCH** on the main window toolbar. The Event List appears.
- Scroll through the Event List and highlight the interested events.
- Double-click on the desired event to view the event video.

Playback Controls: